

## CLAIMS

1. In a rotary transformer type resolver having an inner core on which a rotary transformer output winding is wound and a resolver rotor on which resolver excitation windings are wound, a disconnect protection structure for a crossover that connects the rotary transformer output winding and the resolver excitation windings, the disconnect protection structure comprising:

an insulating tube that covers the crossover and that has outermost ends secured to the crossover; and

thermal expansion coefficient absorption means for absorbing a difference between thermal expansion coefficients of the crossover and the insulating tube to thereby inhibit disconnection of the crossover from the rotary transformer output winding and the resolver excitation windings.

2. The disconnect protection structure of claim 1, wherein the insulating tube is separated into a plurality of insulating tube units, and

wherein only a leftmost end of an outer left insulating tube unit and a rightmost end of an outer right

insulating tube unit are respectively secured to the crossover.

3. The disconnect protection structure of claim 2, wherein the thermal expansion coefficient absorption means comprises the plurality of insulating tube units and a predetermined gap defined between adjacent ones of the plurality of insulating tube units, the plurality of insulating tube units thereby being capable of expanding or contracting in response to temperature changes.

4. The disconnect protection structure of claim 2, wherein the thermal expansion coefficient absorption means comprises adjacent overlapping ends of the plurality of insulating tube units.

5. The disconnect protection structure of claim 1, wherein the thermal expansion coefficient absorption means comprises at least one cutout portion formed on the insulating tube.

6. The disconnect protection structure of claim 5, wherein the insulating tube is bent to define an elbow, and the cutout portion is located at the elbow.

7. A disconnect protection structure for housing a rotary transformer type resolver crossover, comprising:

an insulating tube that covers the crossover and that has outermost ends secured to the crossover, wherein

the insulating tube is divided into a plurality of insulating tube units to enable the insulating tube units to absorb a difference between thermal expansion coefficients of the crossover and the insulating tube and to thereby inhibit disconnection of the crossover.

8. The disconnect protection structure of claim 7, wherein adjacent ones of the plurality of insulating tube units are separated by a predetermined space to enable the plurality of insulating tube units to expand or contract in response to temperature changes to absorb the difference between the thermal expansion coefficients of the crossover and the insulating tube and to thereby inhibit the disconnection of the crossover.

9. The disconnect protection structure of claim 7, wherein adjacent ends of the plurality of insulating tube units overlap one another over a predetermined distance, the predetermined distance changing in response to shifting

of the plurality of insulating tube units relative to one another due to temperature changes.

10. The disconnect protection structure of claim 7, wherein a first one of the plurality of insulating tube units has a first diameter that defines a predetermined distance, and a second tapered diameter that is smaller than the first diameter, a second one of the plurality of insulating tube units being set into the first one of the plurality of tube units by a distance no greater than the predetermined distance to enable the plurality of insulating tube units to shift relative to one another in response to temperature changes.

11. A disconnect protection structure for housing a rotary transformer type resolver crossover, comprising:

a unitary insulating tube that covers the crossover and that has outermost ends secured to the crossover; and

a disconnect stress absorbing cutout portion formed on the unitary insulating tube for absorbing a difference between thermal expansion coefficients of the crossover and the unitary insulating tube to thereby inhibit disconnection of the crossover.

12. The disconnect protection structure of claim 11, wherein ends of the unitary insulating tube are respectively secured to the crossover.

13. The disconnect protection structure of claim 11, wherein the unitary insulating tube is bent to define an elbow, and the disconnect stress absorbing cutout portion is located at the elbow.

14. The disconnect protection structure of claim 11, further comprising at least one additional disconnect stress absorbing cutout portion formed on the unitary insulating tube.